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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,410	08/23/2001	Chang Wan Ha	020488-001000US	9968

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EXAMINER

HO, HOAI V

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 06/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/938,410

Applicant(s)

HA, CHANG WAN

Examiner

Hoai V. Ho

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 11-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

***Response to Amendment***

1. This office action is responsive to communication(s) filed on April 29, 2003.
2. Claims 11-27 are presented for examination.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo et al. USP 5995415 (IDS) in view of Thummalapally et al. USP 6016270 (IDS).

Figures 1, 4 and 5 of Kuo disclose an integrate circuit memory comprising a memory array partitioned into first and second memory banks (col. 12, lines 25-39), in correspondence with one of a plurality of mask options (fig. 1 or fig. 4) such that the first memory bank includes at least one but less than and the second memory bank includes a corresponding remainder. See column 2, line 15 to column 3, line 15 and column 12, lines 25-39.

Figure 4 of Kuo only shows one array instead of providing a plurality of flash memory arrays as the claimed invention. However, this limitation was well known in the art at the time the invention was made. For example, Figure 1 of Thummalapally discloses a plurality of flash memory arrays (14s). It would have been obvious to a person of ordinary skill in the art at the time invention was made to add more arrays to Kuo's simultaneous operation flash memory

device which utilizes the a time-hared address bus and separate memory cell access paths to perform read cycle operation in one memory cell blank in the array while an algorithm operation, such as an erase/reprogram operation, is performed simultaneously in another memory cell bank in the array (col. 1, 10-61) as taught by Thummalapally because Thummalapally suggests that a read operation can always be performed when an algorithm operation is in progress ... the internal address bus is not required during byte program algorithm execution and thus, there is zero overhead on byte program time (col. 2, lines 20-31). The increase system performance would have motivated an artisan at the time the invention was made to follow Thummalapally teachings in the simultaneous operation flash memory device.

5. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Michael et al. (USP 6535426, column 4, lines 1-10) and Challa et al. (USP 5410680, column 18, lines 54-56) disclose a flash memory device with partitioning into blocks or banks.

6. Applicants' arguments have been fully considered but they are not persuasive.

Applicant argues that "Kuo and Thummalapally neither reference teaches or suggests 'a plurality of memory arrays partitioned into first and second memory banks in correspondence with one of a plurality of mask options such that the first memory bank includes at least one but less than all of the plurality of memory arrays and the second memory bank includes a corresponding remainder of the plurality of memory arrays'." The Examiner disagrees with this statement, because Figure 1 or 5 of Kuo discloses the memory array partitioned into first and second memory banks with a flexible bank partition architecture (abstract). Figure 1 of Thummalapally discloses a number of arrays in a memory device (see the rejection under 35


U.S.C. 103(a) above). Therefore, one of ordinary skill in the art would be recognized that Kuo and Thummalapally, taken in combination, disclose all the limitations as the claimed invention.


For the above reasons, it is believed that the rejections should be sustained. Feature of an invention not found in the claims can be given no patentable weight in distinguishing the claimed invention over the prior art.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (703) 308-4839. Other inquiries of this application should be called to (703) 308-0956.

  
H. Ho  
May 29, 2003

  
Hoai V. Ho  
Primary Examiner  
Art Unit 2818